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ABSTRACT

A study was conducted in 1989 to identify some of the differences among state community college systems and to determine whether relationships existed between funding levels and other variations in state or state community college system characteristics. All of the 49 states with a system of publicly supported two-year postsecondary institutions were included (South Dakota, which has no public two-year institutions, was excluded). Five basic relationships were identified: a high percentage of state funding correlated with low student tuition and fee rates; a small state population correlated with fewer numbers of community colleges; a small number of institutions correlated with lower faculty salaries; high per capita income correlated with high faculty salaries, and low per capita income correlated with low faculty salaries; high per capita income level correlated with high student tuition and fees; and low per capita income level correlated with low student tuition and fees. Expenditures per full-time equivalent (FTE) student did not correlate with per capita income, percent of state funding, or student tuition and fees. Variations identified among state systems included the following: (1) the percentage of state funds comprising the budget of state systems ranged from 25% in Kansas to 85% in Washington; (2) the annual expenditure per FTE ranged from $2,172 in North Carolina to $5,821 in Idaho; (3) the average annual per capita income ranged from $10,292 in Mississippi to $21,266 in Connecticut; (4) the average nine-month faculty salary ranged from $19,200 in Mississippi to $45,100 in Alaska; and (5) the average annual charge for student tuition and fees ranged from $96 in California to $1,966 in Vermont. An appendix provides statistics by state. (JMC)

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A CORRELATION STUDY OF SELECTED CHARACTERISTICS OF STATES AND STATE COMMUNITY COLLEGE SYSTEMS

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A CORRELATION STUDY OF SELECTED CHARACTERISTICS OF STATES AND STATE COMMUNITY COLLEGE SYSTEMS

It is noted that the major sources of revenue for state community colleges are state funds, local funds, and student tuition and fees (Breneman & Nelson, 1981; Lombardi, 1973; Wattenbarger & Mercer, 1988). Breneman and Nelson (1981) reported that among community college systems in the United States, there have been reductions in the proportion of local funds accompanied by corresponding increases in the proportion of state funds. Along with the varying proportions of state and local funding, there are other differences among state community college systems that relate to funding levels and expenditures.

The purpose of this study was to identify some of the differences among state community college systems and to determine if relationships exist between state community college system funding levels and other varying state or state community college system characteristics. Several related questions were raised and addressed in this study. For example; is the size of a state, in terms of its total population, associated with the number of institutions available to provide educational services? Is the proportion of state funding comprising annual operating budgets

associated with faculty salaries, annual student tuition and fees, or annual expenditures per FTE? Is the number of institutions comprising state community college systems associated with state populations or per capita income?

All of the 49 states that are considered to have a system of publicly supported two-year postsecondary educational institutions were included. South Dakota, is excluded because no publicly supported community colleges exist.

Three sources of pertinent information on states and state community college systems were used: 1) Financing Community Colleges, (1988) by Wattenbarger and Mercer; 2) The Chronicle of Higher Education Almanac, (1988); and 3) The 1988 AACJC Statistical Yearbook. Data from the three sources were compiled in 1988 and analyzed in 1989. Thirteen correlation analyses of 7 variables were conducted. The Statistical Package for the Social Sciences (SPSS) was used to conduct Pearson Product-Moment Correlation analyses. Percent of state funding was correlated with: expenditures per FTE, number of institutions comprising respective state systems, average faculty salaries, and student tuition and fees. Expenditures per FTE was correlated with: number of institutions, per capita income, and student tuition and

fees. Number of institutions comprising respective state systems was correlated with: rank of state by total population, per capita income, and average faculty salaries. Per capita income was correlated with: average faculty salaries, and student tuition and fees. Lastly, average faculty salaries was correlated with student tuition and fees. The .05 level of significance was used for all cases. Appendix I displays the data compiled and analyzed for each of the 49 states.

A limitation of this correlation study that should be noted is that there are variations in the data reported by the three sources. For whatever reason(s), different sources sometimes differ on the same information; and too, the same source sometimes differs in itself. It is also known that expenditures per FTE are, sometimes, calculated differently. Most states use credit hours to determine cost per FTE, but there are states that use contact hours in their calculations (i.e., North Carolina). Nevertheless, the best data available were used.

FINDINGS

All findings are based on aggregate data representing all states and state community college systems. Findings do not represent individual states or state systems of community

colleges. Of the 7 variables investigated through 13 correlation analyses, 5 relationships were identified.

1) In general, where there is a high percentage of state funding, student tuition and fee rates are low. A high percentage of state funding refers to any percent over the national average of 58.61%. Low tuition rates are those below the national average of $753.00. The converse of this relationship is not true. In other words, where there is a low percentage of state funding, student tuition and fee charges are not necessarily higher.

2) The smaller the state population, the more likely there are fewer numbers of community colleges within that state. The less populated states are those whose population rank is 25th and higher. States with fewer community colleges are those with less than 21 institutions (national average). The converse of this relationship is not true as states with larger resident populations do not necessarily have a higher number of community colleges.

3) Generally, where there are fewer numbers of institutions (less than 21), faculty salaries are lower; being below the national average of $26,847. The converse of this relationship is not true. In other words, a higher number of institutions is not associated with higher faculty

salaries.

4) Where there is a high per capita income (over $14,687), faculty salaries tend to be high also (over $26,847). Where there is a low per capita income (less than $14,687), faculty salaries are generally low; being less than $26,847. Therefore, the converse of the relationship between per capita income and faculty salaries is also true.

5) In general, if the per capita income level is high (above $14,687), student tuition and fees are high (above $753). Conversely, where the per capita income is low, tuition and fees tend to be low.

SUMMARY

The author believes that the surprising non-finding was that expenditures per FTE was not correlated with per capita income, percent of state funding, or student tuition and fees. For the relationships that were identified, the "truthfulness" of the findings is considered to be enhanced due to investigating an entire population (all 49 states), versus using a sample of the population as, generally, the larger the sample size, the more valid the findings.

Based on the 1988 data compiled, the following

information on community college system variations was identified:

1) The percentage of state funds comprising the budget of state community college systems ranged from 25% in Kansas to 85% in Washington. Excluded are: Arizona, Hawaii, Maine, Massachusetts, New Hampshire, North Dakota, and Vermont.

2) The annual expenditure per FTE ranged from $2,172 in North Carolina, to $5,821 in Idaho. Excluded are: Alaska, Hawaii, Kentucky, Maine, Massachusetts, New Hampshire, North Dakota, Oklahoma, Texas, and Vermont.

3) The number of institutions comprising state community college systems ranged from 1 in Alaska to 106 in California.

4) The average annual per capita income ranged from $10,292 in Mississippi to $21,266 in Connecticut.

5) The average nine-month faculty salary ranged from $19,200 in Mississippi to $45,100 in Alaska.

6) The average annual charge for student tuition and fees ranged from $96 in California to $1,966 in Vermont.

This information is presented for each state in Appendix I.

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APPENDIX I

STATISTICS FOR STATES AND STATE COMMUNITY COLLEGE SYSTEMS

STATE	% STATE FUNDS	EXP. PER FTE	POP. RANK	NO. OF INST.	AVG.PER CAPITA INCOME	AVG.SAL PER FACULTY	AVG. TUIT. &FEES
1. ALABAMA	64.00	4,458	22	41	11,940	27,500	666
2. ALASKA	74.90	*	50	1	18,230	45,100	824
3. ARIZONA	*	3,454	25	20	14,315	31,800	358
4. ARKANSAS	77.00	5,092	33	10	11,507	22,500	472
5. CALIFORNIA	61.63	3,007	1	106	17,821	36,100	96
6. COLORADO	58.90	3,202	26	17	15,584	24,300	623
7. CONNECT.	68.85	4,511	28	17	21,266	30,000	573
8. DELAWARE	78.00	3,814	47	3	16,696	26,500	932
9. FLORIDA	74.68	3,620	4	34	15,584	24,800	608
10. GEORGIA	78.00	5,104	11	19	14,300	26,300	799
11. HAWAII	*	*	39	7	15,679	28,000	281
12. IDAHO	38.70	5,821	42	3	11,868	25,000	690
13. ILLINOIS	37.00	2,744	6	51	16,442	30,900	866
14. INDIANA	64.00	3,332	14	14	13,914	20,400	1,211
15. IOWA	49.07	2,633	29	22	14,236	22,400	1,057
16. KANSAS	25.20	4,072	32	21	15,126	25,500	537
17. KENTUCKY	74.80	*	23	15	12,059	22,200	540
18. LOUISIANA	69.24	3,349	20	5	11,473	24,400	619
19. MAINE	*	*	38	8	13,954	22,300	880
20. MARYLAND	40.00	2,855	19	19	18,124	30,600	906
21. MASS.	*	*	13	16	19,142	29,800	750
22. MICHIGAN	40.60	3,461	8	33	15,393	32,700	917
23. MINNESOTA	64.00	2,700	21	23	15,927	30,400	1,229

24. MISSISSIPI	45.80	2,998	31	19	10,292	19,200	489
25. MISSOURI	39.80	4,218	15	16	14,687	27,800	524
26. MONTANA	42.50	3,553	44	3	12,347	26,200	423
27. NEBRASKA	36.80	3,532	36	13	14,328	22,200	740
28. NEVADA	81.20	2,912	41	4	16,366	27,400	573
29. NEW HAMP.	*	*	40	7	17,529	22,200	1,514
30. NEW JERSEY	34.00	3,756	9	19	20,352	30,600	763
31. NEW MEXICO	77.70	3,766	37	15	11,875	26,900	407
32. NEW YORK	33.80	4,248	2	45	18,004	33,600	1,340
33. NO. CAR.	78.60	2,172	10	58	13,314	20,300	216
34. NORTH DAK.	*	*	46	5	13,004	26,100	1,074
35. OHIO	48.89	5,041	7	54	14,612	26,900	1,181
36. OKLAHOMA	79.10	*	27	16	12,551	26,400	456
37. OREGON	34.70	3,421	30	15	14,041	27,700	484
38. PENNSYLVA.	37.40	2,794	5	18	15,212	27,900	1,626
39. RHODE IS.	74.00	4,135	43	2	15,555	27,000	844
40. SO. CAR.	67.74	3,003	24	21	12,004	21,600	645
41. TENNESSEE	77.30	4,740	16	15	12,880	24,100	660
42. TEXAS	61.33	*	3	70	13,866	28,900	300
43. UTAH	58.00	5,063	35	5	11,366	25,600	884
44. VERMONT	*	*	49	2	14,302	25,500	1,966
45. VIRGINIA	69.70	3,604	12	34	16,517	25,700	775
46. WASHINGTON	84.60	2,932	18	28	15,599	27,500	654
47. WEST VIR.	70.00	2,894	34	10	11,020	21,800	517
48. WISCONSIN	26.00	5,147	17	43	14,742	29,300	887
49. WYOMING	64.00	5,267	51	7	12,709	27,600	516
NATIONAL AVERAGES	58.61	3,755	--	21	14,687	26,847	753

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